We claim:

1. A method of signal transmission comprising the steps of:

splitting a signal s_1 into signals $s_1(a)$ and $s_1(b)$, wherein the signal s_1 is split unevenly such that the signal $s_1(a)$ has an associated power level greater than a power level associated with the signal $s_1(b)$; and

phase sweeping the signal $s_1(b)$ using a phase sweep frequency signal to produce a phase swept signal $s_1(b)$.

2. The method of claim 1 comprising the additional steps of:

amplifying the signal $s_1(a)$ to produce an amplified signal $s_1(a)$; and

amplifying the phase swept signal $s_1(b)$ to produce an amplified phase swept signal $s_1(b)$.

3. The method of claim 2, wherein power levels associated with the amplified signal $s_1(a)$ and the amplified phase swept signal $s_1(b)$ are approximately equal.

4. The method of claim 2, wherein the signal $s_1(a)$ and phase swept signal $s_1(b)$ are amplified an equal amount.

5. The method of claim 2, wherein the signal $s_1(a)$ is amplified an amount greater than an amount phase swept signal $s_1(b)$ is amplified.

6. A method of signal transmission comprising the steps of:

splitting a signal s_1 into signals $s_1(a)$ and $s_1(b)$, wherein the signal s_1 is split unevenly such that the signal $s_1(a)$ has an associated power level greater than a power level associated with the signal $s_1(b)$; and

phase sweeping the signal $s_1(a)$ using a phase sweep frequency signal to produce a phase swept signal $s_1(b)$.

7. The method of claim 6 comprising the additional steps of:

amplifying the signal $s_1(b)$ to produce an amplified signal $s_1(b)$; and

amplifying the phase swept signal $s_1(a)$ to produce an amplified phase swept signal $s_1(a)$.

8. The method of claim 7, wherein power levels associated with the amplified signal $s_1(b)$ and the amplified phase swept signal $s_1(a)$ are approximately equal.

9. The method of claim 7, wherein the signal $s_1(b)$ and phase swept signal $s_1(a)$ are amplified an equal amount.

10. The method of claim 7, wherein the signal $s_1(b)$ is amplified an amount greater than an amount phase swept signal $s_1(a)$ is amplified.

11. A base station comprising:

a splitter for splitting a signal s_1 into signals $s_1(a)$ and $s_1(b)$, wherein the signal s_1 is split unevenly such that the signal $s_1(a)$ has an associated power level greater than a power level associated with the signal $s_1(b)$; and

a multiplier for phase sweeping the signal $s_1(b)$ using a phase sweep frequency signal to produce a phase swept signal $s_1(b)$.

12. The base station of claim 11 further comprising:

a first amplifier for amplifying the signal $s_1(a)$ to produce an amplified signal $s_1(a)$; and

a second amplifier for amplifying the phase swept signal $s_1(b)$ to produce an amplified phase swept signal $s_1(b)$.

13. The base station of claim 12, wherein power levels associated with the amplified signal $s_1(a)$ and the amplified phase swept signal $s_1(b)$ are approximately equal.

14. The base station of claim 12, wherein the signal $s_1(a)$ and phase swept signal $s_1(b)$ are amplified an equal amount.

15. The base station of claim 12, wherein the signal $s_1(a)$ is amplified an amount greater than an amount phase swept signal $s_1(b)$ is amplified.

16. A base station comprising:

a splitter for splitting a signal s_1 into signals $s_1(a)$ and $s_1(b)$, wherein the signal s_1 is split unevenly such that the signal $s_1(a)$ has an associated power level greater than a power level associated with the signal $s_1(b)$; and

a multiplier for phase sweeping the signal $s_1(a)$ using a phase sweep frequency signal to produce a phase swept signal $s_1(b)$.

17. The base station of claim 16 comprising the additional steps of:

a first amplifier for amplifying the signal $s_1(b)$ to produce an amplified signal $s_1(b)$; and

a second amplifier for amplifying the phase swept signal $s_1(a)$ to produce an amplified phase swept signal $s_1(a)$.

18. The base station of claim 17, wherein power levels associated with the amplified signal $s_1(b)$ and the amplified phase swept signal $s_1(a)$ are approximately equal.

19. The base station of claim 17, wherein the signal $s_1(b)$ and phase swept signal $s_1(a)$ are amplified an equal amount.

20. The base station of claim 17, wherein the signal $s_1(b)$ is amplified an amount greater than an amount phase swept signal $s_1(a)$ is amplified.